1: Metraux E-5 (1934-1935) 1940
OY2 Easter Islanders OY2

STONE MASONRY

Cut stones were used extensively on Easter Island. Dressed slabs or blocks are found on most of the big ahus and appear in structures such as wells and underground houses, and in the stone houses of Orongo. Worked curbs, taken from the foundations of thatched huts, were often incorporated into the facings of ahus and wells (pl. 1, *C*).

Apart from Easter Island, there are only three regions in Polynesia where stone cutting was well developed—the Marquesas, the Society Islands, and Tonga. In Tonga the material employed was easily worked limestone (147, p. 5); in the Marquesas, coarse-grained tuff (141, p. 8); and in the Society Islands limestone or tuff blocks and occasionally basalt (77, p. 5). The excellence of Easter Island stone work is due partly to the use of hard vesicular basalt. Though cut stones were not so common on Easter Island as in the Marquesas, they show a more elaborate technique.

The presence of dressed stone masonry in Polynesia has been cited as evidence of foreign contact or of two distinct migrations of people. However, examples of such work are scattered and show no uniform specialization. Generally the dressed slabs are merely trimmed at the edges and smoothed on the face. This is a simple technique which might easily be invented and applied locally. Stimulus for the cutting of stones was the desire to improve upon the slabs so abundantly provided by nature in most Polynesian islands. The lava dikes, the tuff deposits, or the limestone strata, found on the surface of the ground, were ready to be quarried and broken into rectangular slabs.

The facings of a few Easter Island ahus are among the most perfect masonry work in Polynesia. The slabs or blocks have not only been smoothed to evenness, but they have been dressed or selected so as to fit exactly (fig. 52; pl. 4, *A*). The masterpiece of Easter Island stone work is the ahu Vinapu (pl. 7, *B*):

> The seaward wall is made of two rows of marvelously smooth slabs whose edges join with mathematical accuracy. The corner slabs have been rounded. A hole in the face has been patched with a stone carved to fit perfectly. Such a facing resembles the famous walls of the Inca palaces of the Cuzco. Historical connections have been proposed to account for this similarity. However, it must be remembered that ahu Vinapu is unique on Easter Island—an extraordinary achievement carrying to the height of perfection a few simple techniques, applied with less skill in other monuments. Between the Easter Island monuments and the great buildings of Peru the similarity does not go beyond the exact fitting of the stones. The plan and the structure of the Inca ruins are entirely different. There is neither geographical nor chronological link between the two cultures. The wonderful stone constructions of the Peruvians lie in the valleys of inner Peru or on the highland of Bolivia, and are separated from the sea by mountains and hundreds of miles of land. If there had been a historical connection between Easter Island and the interior of Peru, surely there would have been more evidence of the contact than a simple and obvious device of masonry.

1: Metraux E-5 (1934-1935) 1940
OY2 Easter Islanders OY2

Exact joining of masonry by means of jogs was practiced in other parts of Polynesia, for instance in the facing of a marae on Meetia, near Tahiti (77, p. 118), in the construction of an irrigation ditch on Kauai, Hawaiian islands (19, pp. 105-106), and in the village of Kailua on Hawaii (72, p. 47). However, this scarfing technique was too exceptional to be considered a special culture trait scattered by migrations. It must have been developed locally by patient stone cutters.

The Easter Island retaining or facing walls, made of vertical slabs planted on end and capped with horizontally laid slabs, have a close affinity with several maraes in the leeward Society Islands and with a heiau on the island of Nihoa in the Hawaiian group (72, p. 46). Similar construction was used in the facing of large Mangarevan maraes, in the Tuamotus, in Tongareva (30, fig. 40, *b*), and in the Marquesas where the tops of many slab walls are finished with one or more courses of water-worn boulders (141, p. 12).

STONE IMAGES

The Quarry

The quarry of the giant statues on the slopes of Rano-raraku crater is one of the most spectacular places on the island. The fame of Easter Island rests mainly on the amazement produced by this quarry and by the unfinished statues in it. Routledge (194, pp. 175-199) devoted most of her time on the island to a study of this quarry and, with the help of Lieutenant Ritchie, made a complete and accurate survey of the site.

Almost all the statues standing on ahus came from Rano-raraku. The only exceptions are: the stone image taken from Orongo and now in the British Museum; the image Pou-hakanonga, from the ahu Ana-koiroroa, which is now in the Musée du Cinquantenaire, Brussels; another basaltic statue at Puna-marengo; and seven or eight statues of the ahu on the headland of Poike which were carved from a local soft rock.

The Rano-raraku was chosen as a quarry because of the suitable quality of the rock. The volcanic cone, situated on the south coast not far from Poike, is composed of bedded ashes derived from the crater. The southern slope of the exterior of the volcano and the southern and southeastern sides of the interior were quarried, probably because the rock was most easily reached there.

The quarries on the southern outer slope of the volcano begin about 50 or 60 meters above the foot of the hill. There the tuff crops out between vertical fissures 10 to 20 meters long. The ledges produced by these depressions differ in width and are responsible for the positions and sizes of some of the unfinished statues. The carvers often had to climb steep walls to reach the portion of rock on which they were working.

1: Metraux E-5 (1934-1935) 1940
OY2 Easter Islanders OY2

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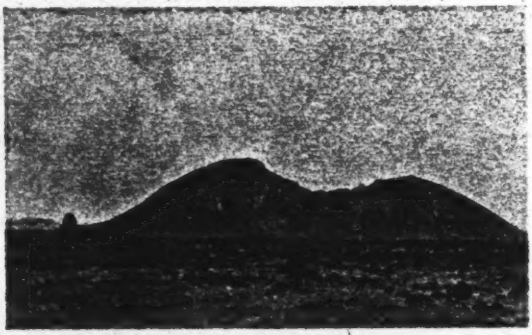

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A, VIEW OF RANO-RARAKU FROM THE SOUTH; *B*, ANAKENA BAY; *C*, CISTERN AT LA PEROUSE.

[End Plate I]

1: Metraux E-5 (1934-1935) 1940
OY2 Easter Islanders OY2

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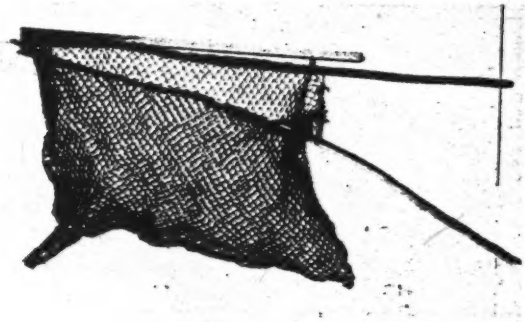

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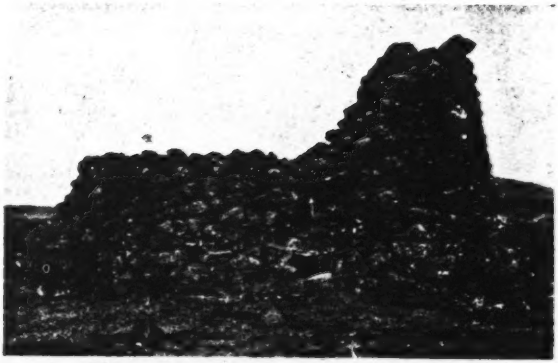

B

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C

A, DOUBLE-HANDLED DIP NET, BAG 76 CM. DEEP, 140 CM. LONG, MESHES 2 CM. WIDE, POLES 149 AND 161 CM. LONG (MUS. F. VOLKERKUNDE, BERLIN, VI.4962); *B*, TURTLE WATCHTOWER (TUPA) NEAR LA PEROUSE; *C*, REED MAT (MUS. F. VOLKERKUNDE, BERLIN, VI.4970).

End plate II

1: Metraux E-5 (1934-1935) 1940
OY2 Easter Islanders OY2

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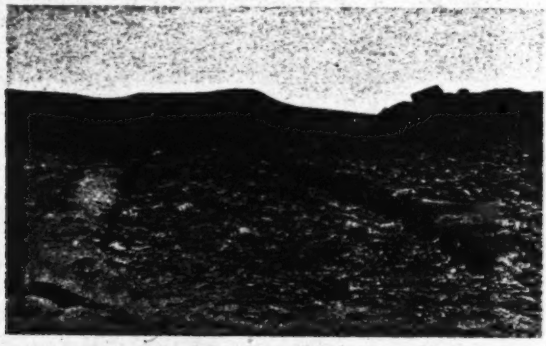

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[784]

A, STONE FOUNDATION OF A HOUSE; B, STONE HOUSE AT ORONGO; C, TAPU PILLAR (PIPI-HEREKO) NEAR AHU TONGA-RIKI ON THE SOUTH COAST.

[End Plate III]

1: Metraux E-5 (1934-1935) 1940.
OY2 Easter Islanders OY2

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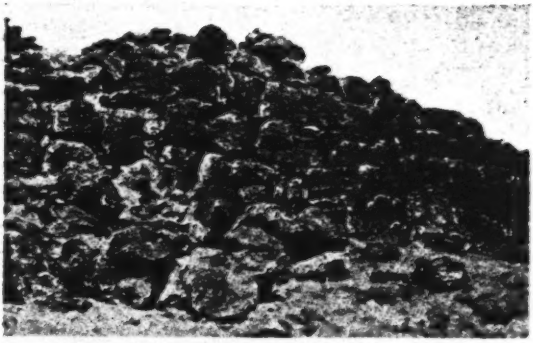

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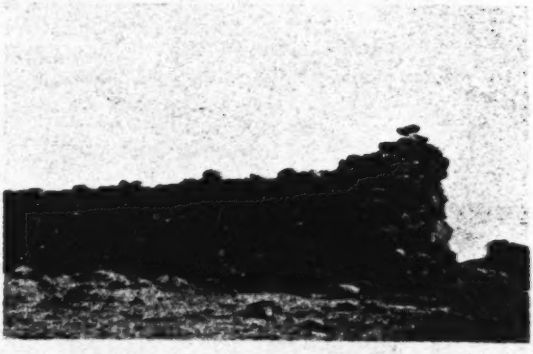

C

A, FACADE OF AHU HANGA-O-HONU MADE OF FITTED, SQUARE SLABS OF BASALT; *B*, AHU TAVARI, SEMI-PYRAMIDAL TYPE (*AHU PAEPAE*); *C*, *AHU POEPOE* NEAR AHU MAHATUA ON THE NORTH COST.

[End Plate IV]

1: Metraux E-5 (1934-1935) 1940
OY2 Easter Islanders OY2

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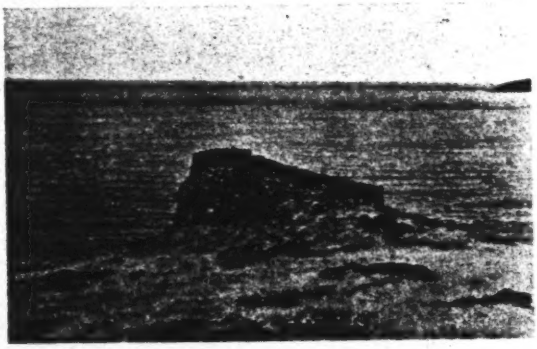

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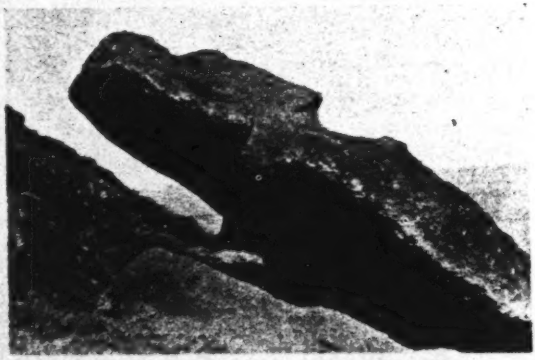

C

A, AHU-TE-AVA NEAR ANAKENA, WEDGE-SHAPED AHU; *B*, RECTANGULAR AHU NEAR ANAKENA; *C*, UNFINISHED STATUE AT RANO-RARAKU, ATTACHED TO ROCK BY FLANGE.

[End Plate V]

1: Metraux E-5 (1934-1935) 1940
OY2 Easter Islanders OY2

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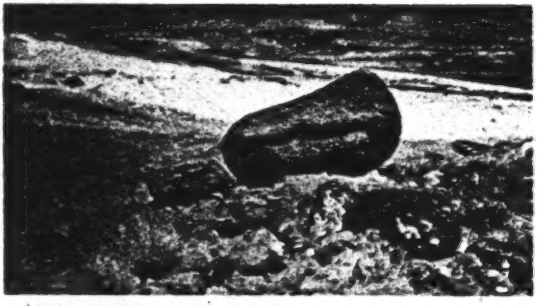

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A, STATUE FROM AHU NEAR ANAKENA BAY; *B*, AHU VINAPU, CORNER; *C*, PETROGLYPHS AT ORONGO.

[End Plate VII]

4:Metraux E-5 (1934-1935) 1945
OY2 Easter Island OY2

who formed a society, which existed not only on Easter Island but also on other Polynesian islands. In childhood they were taught in special schools to memorize and to recite the lore of their tribe.

Everywhere in Polynesia the chanters use such an "orator staff." Sometimes, as in New Zealand, the staffs are provided with notches, which are supposed to help in reciting genealogical tables. In the Marquesas, the chanters held, while chanting, a bundle made of string wound about with knotted ends hanging down, which was thought of as containing the substance of the chant though the connection between the words and the contents of the bundle was loose. The bundles symbolized the chants and were in consequence of paramount importance. They were solemnly given to the young people after they had been initiated into the lore of their ancestors.

These facts, I concluded, give us the best clue in the problem of the Easter Island tablets. To its chanters as to the chanters of other islands, the "orator staffs" were the accessories and the symbols of their function. Originally, the designs on the staffs or tablets might have been mnemonic, but later on they lost their exact significance in the minds of the natives and were looked upon merely as simple ornaments or magic symbols. It may be added that even now we can observe on Easter Island a slight relation that has been preserved between design and chant. The natives are in the habit of chanting when they make string figures or cat's cradles. This interpretation of the tablets may not contain the whole truth about them. I offer it rather as the hypothesis which best fits the facts available today, and which harmonizes also with what we know of an underlying tendency in Polynesian civilization.

But these are not all the questions that have been raised by Easter Island. Some observers have found in the well-carved and well-fitted stones of its sanctuaries likenesses and relations to the ancient remains in Peru, and to account for them have said that there must have been intercourse between these two parts of the world at some period of history. But close study has revealed that between the Peruvian and the island ruins the resemblances do not go beyond the general fact of an exact fitting of the stones. The plan and the structure of the Peruvian buildings are entirely different. In Peru the walls are all of carved stone blocks, whereas in Easter Island they consist of slabs set on edge outside with rubble behind. The only conspicuous architectural achievement of the Easter Islanders was to select the slabs and to dress their corners so that no gap would appear on the surface and impair the general appearance. This they could naturally have learned to do without crossing the Pacific in frail canoes and making the long journey inland to the site of the wonderful ruins in Peru. Moreover, these are certainly far older than the Easter Island sanctuaries. Thus it seems clear that we must

5: Roggeveen T-5 (1721-1722)1908
OY2 Easter Islanders OY2

342 of the building. Then the interstices, which are all of oblong shape, are closed up and covered over with a sort of rush or long grass, which they put on very thickly, layer upon layer, and fasten on the inner side with lashings (the which they know how to make from a certain field product called *Piet*, very neatly and skilfully, and is in no way inferior to our own thin cord); so that they are always as well shut in against wind and rain as those who live beneath thatched roofs in Holland.

These dwellings have no more than one entrance way, which is so low that they pass in creeping on their knees, being round above, as a vault or archway[1]; the roof is also of the same form. All the chattels we saw before us (for these long huts admit no daylight except through the one entrance-way, and are destitute of windows and closely shut in all round) were mats spread on the floor, and a large flint stone which many of them use for a pillow. Furthermore they had round about their dwellings certain big blocks of hewn stone, three or four feet in breadth, and fitted together in a singularly neat and even manner[2]; and, according to our judgment, these serve them for a stoop[3] on which to sit and chat during the cool of the evening.

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[1] "The door-way is in the middle of one side, formed like a porch and so low and narrow as just to admit a man to enter upon all fours." Cook, Bibl. no. 16.

[333] [2] "They are built, or ratherfaced, with hewn stones of a very large size; and the workmanship is not inferior to the best plain piece of masonry we have in England. They use no sort of cement; yet the joints are exceedingly close and the stones morticed and tenanted one into another, in a very artful manner." Cook, Bibl. no. 16.

"A remarkable circumstance was the junction of these stones, which were laid after the most excellent rules of art, fitting in such a manner as to make a durable piece of architecture." Forster, G., Bibl. no. 21.

[3] The word in the original is *stoep*. There is no synonymous expression in English, though 'porch,' 'threshold,' or 'piazza' each corresponds in a way. In the United States of America, and in the South African colonies, the Dutch term has been adopted; and is now written 'stoop.' It means the paved space adjoining the front door of a house, where on fine evenings the inmates are wont to sit in chairs or on benches.

15:Routledge E-5 (1914-1915) 1919
OY2 Easter Islanders OY2

764 532 under a hundred, or over one-third of the whole.[1] The figures connected with them, of which traces still remain, were counted as 231, but as many are in fragments, this number is uncertain.

764 532 333 A typical image ahu (fig. 36) is composed of a long wall running parallel with the sea, which, in a large specimen, is as much as 15 feet in height and 300 feet in length; it is buttressed on the land side with a great slope of masonry. The wall is in three divisions. The main or central portion projects in the form of a terrace on which the images stood, with their backs to the sea; it is therefore broad enough to carry their oval bed-plates; these measure up to about 10 feet in length by 8 feet or 9 feet in width, and are flush with the top of the wall. On the great ahu of Tongariki there have been fifteen statues, but sometimes an ahu has carried one figure only.

764 333 The wall which forms the landward side of the terrace is continued on either hand in a straight line, thus adding a wing at each end of the central portion which stands somewhat farther back from the sea (fig. 41). Images were sometimes placed on the wings, but it was not usual. From this continuous wall the masonry slopes steeply till it reaches a containing wall, some 3 feet high, formed of finely wrought slabs of great size and of peculiar shape; the workmanship put into this wall is usually the most highly finished of any part of the ahu. Extending inland from the foot of this low wall is a large, raised, and smoothly paved expanse. The upper surface of this, too, has an appreciable fall, or slope, inland, though it is almost horizontal, when compared with the glacis.

By the method of construction of this area, vault accommodation is obtained between its surface pavement and the sheet of volcanic rock below, on which the whole rests. In the largest specimen the whole slope of masonry, measured that is from either the sea-wall of the wing or from the landward wall of the terrace to its farthest extent, is about 250 feet. Beyond this the ground is sometimes levelled for another 50 or 60 yards, forming a smooth sward which much enhanced the appearance of the ahu. In two cases the ahu is approached by a strip of narrow pavement formed of water-worn boulders laid flat, and bordered with the same kind of stone set on end; one of these

[1] This excludes some fifteen which may have carried statues, but about which doubt exists.

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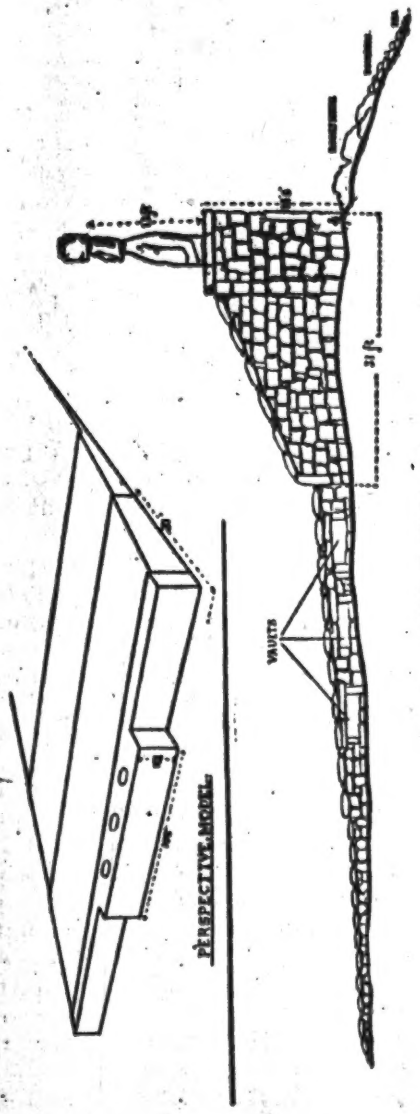

FIG. 36.—DIAGRAM OF IMAGE ARU.

[p. 169]

15:Routledge E-5 (1914-1915) 1919
OY2 Easter Islanders OY2

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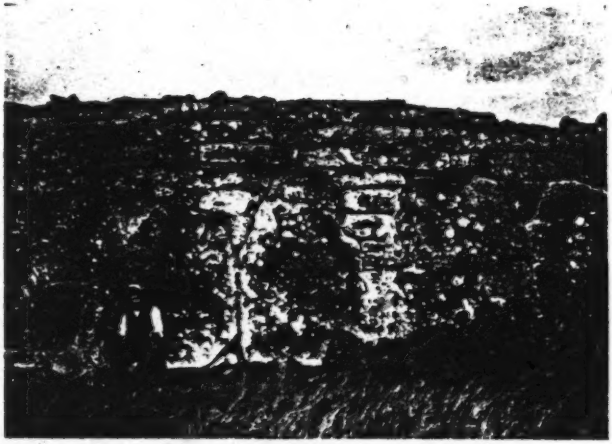
FIG. 37.



AHU TEPEU.

Part of seaward wall showing large slabs—some of the stones forming upper courses are wrought foundation-stones of canoe-shaped houses, pp. 215–16.

[facing p. 170]

15:Routledge E-5 (1914-1915) 1919
OY2 Easter Islanders OY2

pavements is 220 feet in length by 12 feet in width, the other is somewhat smaller (fig. 93).

The general principle on which the sea or main walls are constructed is usually the same, though the various ahu differ greatly in appearance: first comes a row of foundation blocks on which have been set upright the largest stones that could be found; the upper part of the wall is composed of smaller stones, and it is finished with a coping. The variety in effect is due to the difference in material used, In some cases, as at Tongariki (fig. 33), the most convenient stone available has consisted of basalt which has cooled in fairly regular cubes, and the rows are there comparatively uniform in size; in other instances, as at Ahu Tepeu on the west coast (fig. 37), the handiest material has been sheets of lava, which have hardened as strata, and when these have been used the first tier of the wall is composed of huge slabs up to 9 feet in height. Irregularities in the shape and size of the big stones are rectified by fitting in small pieces and surmounting the shorter slabs with additional stones until the whole is brought to a uniform level; on the top of this now even tier horizontal blocks are laid, till the whole is the desired height (fig. 42). The amount of finish put into the work varies greatly: in many ahu the walls are all constructed of rough material; in others, while the slabs are untouched, the stones which bring them to the level and the cubes on the top are well wrought; in a very few instances, of which Vinapu (fig. 35) is the best example, the whole is composed of beautifully finished work. Occasionally, as at Oroi, natural outcrops of rock have been adapted to carry statues (fig. 122).

The study of the ahu is simplified by the fact that they were being used in living memory for the purpose for which they were doubtless originally built. They have been termed "burial-places," but burial in its usual sense was not the only, nor in most cases their principal, object. On death the corpse was wrapped in a tapa blanket and enclosed in its mattress of reeds; fish-hooks, chisels, and other objects were sometimes included. It was then bound into a bundle and carried on staves to the ahu, where it was exposed on an oblong framework. This consisted of four corner uprights set up in the ground, the upper extremities of which were Y-shaped, two transverse bars rested in the bifurcated ends, one at the head, the other at the foot, and

15;Routledge E-5 (1914-1915) 1919
OY2 Easter Islanders OY2

on these transverse bars were placed the extremities of the bundle which wrapped the corpse. The description and sketch are based on a model framework, and a wrapped-up figure, one of the wooden images of the island, prepared by the natives to amplify their verbal description.[1] At times, instead of the four supports, two stones were used with a hole in each, into which a Y-shaped stick was placed (fig. 38). While the corpse remained on the ahu the district was marked off by the péra, or taboo, for the dead; no fishing was allowed near, and fires and cooking were forbidden within certain marks—the smoke, at any rate, must be hidden or smothered with grass. Watch was kept by four relatives, and anyone breaking the regulations was liable to be brained. The mourning might last one, two, or even three years, by which time the whole thing had, of course, fallen to pieces. The bones were either left on the ahu, or collected and put into vaults of oblong shape, which were kept for the family, or they might be buried elsewhere. The end of the mourning was celebrated by a great feast, after which ceremony, as one recorder cheerfully concluded, "Pappa was finished."

Looked at from the landward side, we may, therefore, conceive an ahu as a vast theatre stage, of which the floor runs gradually upwards from the footlights. The back of the stage, which is thus the highest part, is occupied by a great terrace, on which are set up in line the giant images, each one well separated from his neighbour, and all facing the spectator. Irrespective of where he stands he will ever see them towering above him, clear cut out against a turquoise sky. In front of them are the remains of the departed. Unseen, on the farther side of the terrace, is the sea. The stone giants, and the faithful dead over whom they watch, are never without music, as countless waves launch their strength against the pebbled shore, showering on the figures a cloud of mist and spray.

Reconstruction and Transformation.—Those which have been described are ideal image ahu, but not one now remains in its original condition. It is by no means unusual to find, even in the oldest parts now existing, that is in walls erected to carry statues, pieces of still older images built into the stonework; in one case a whole statue has been used as a slab for the sea-wall,

[1] The body was no doubt supported by staves, though they were dispensed with in the model, being unnecessary for the wooden figure.

15:Routledge E-5 (1914-1915) 1919
OY2 Easter Islanders OY2

FIG. 39.

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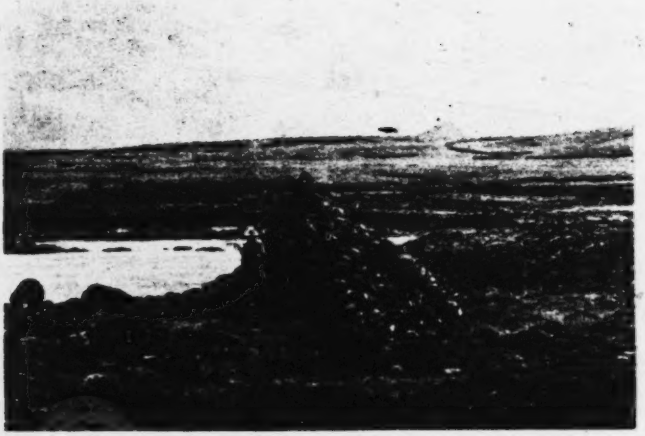

A SEMI-PYRAMID AHU.

FIG. 40.

DIAGRAM OF SEMI-PYRAMID AHU.

[facing p. 172]

15:Routledge E-5 (1914-1915) 1919
OY2 Easter Islanders OY2

showing that alteration has taken place even when the cult was alive (fig.). Again, a considerable number of ahu, some thirteen in all, after being destroyed and terminating their career as image-terraces, have been rebuilt after the fashion of others constructed originally on a different plan (fig. 39). This is a type for which no name was found: it is in form that of a semi-pyramid, and there are between fifty and sixty on the island, in addition to those which have been in the first place image-ahu (fig. 42). A few are comparatively well made, but most are very rough. They resemble a pyramid cut in two, so that the section forms a triangle; this triangle is the sea-wall; the flanking buttress on the land side is made of stones, and is widest at the apex or highest point, gradually diminishing to the angles or extremities. The greatest height, in the centre, varies from about 5 feet to 12 feet, and a large specimen may extend in length from 100 feet to 160 feet. They contain vaults. In a few instances they are ornamented by broken pieces of image-stone, and occasionally by a row of small cairns along the top, which recall the position of the statues on the image-platform; for these no very certain reason was forthcoming, they were varyingly reported to be signs of "péra" or as marking the respective right of families on the ahu. As image-terraces may be found reconstructed as pyramid ahu, the latter form of building must have been carried on longer than the former, and probably till recent times, but there is nothing to show whether or not the earliest specimens of pyramid ahu are contemporary with the great works, or even earlier.

Overthrow of the Images and Destruction of the Ahu.—The only piece of a statue which still remains on its bed-plate is the fragment already alluded to at Tongariki (fig. 34). In the best-preserved specimens the figures lie on their faces like a row of huge nine-pins; some are intact, but many are broken, the cleavage having generally occurred when the falling image has come in contact with the containing wall at the lower level. The curious way in which the heads have not infrequently turned a somersault while falling and now lie face uppermost is shown in the eighth figure from the western end on Tongariki ahu (fig. 34).

No one now living remembers a statue standing on an ahu; and legend, though not of a very impressive character, has

15:Routledge E-5 (1914-1915) 1919
OY2 Easter Islanders OY2

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FIG. 41.

AHU MAHATUA, SEAWARD SIDE

Image ahu, with east wing clearly defined. Landward side and centre converted to semi-pyramid form.

[facing p. 173]